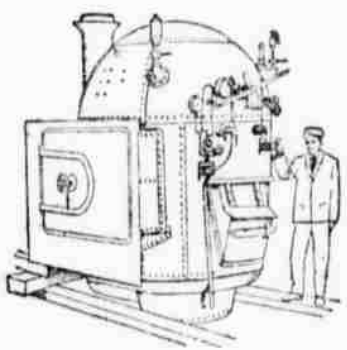


INDUSTRY & MECHANICS

NEW RAILROAD MOTOR.

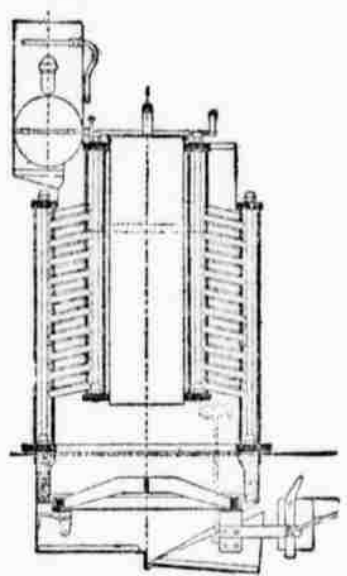
A Successful Device Which Is Attracting Much Attention in Europe.

For very many reasons, among which not the least is the sharp competition in many localities of the electric tramways, railroad men have been for years anxious for a cheaper and simpler motive power than the locomotive. The locomotive is all right for long, heavy trains and infrequent service, but it is a complicated and expensive machine,



OUTSIDE VIEW OF BOILER.

and requires the services of a highly-skilled engineer. What is needed is something with the simplicity of an ordinary motor car on a street tramway. Several experiments are being tried in this country, says the National Tribune, and which look very hopeful, with an ordinary passenger car to which a gasoline motor has been attached. This is not only run quite cheaply, so far as fuel is concerned, but it needs no water tanks, and any man capable of running a gasoline engine can run it and also act as conductor. Therefore it can make frequent trips, charge a low rate of fare, and yet return a profit. It is thought that this device will be quite useful on many of the western roads where it does not pay to run a regular train more than once or twice a day, and then these, in order to be profitable, have to make long trips and strike points at inconvenient hours. It appears that even in Europe, thickly settled as it is, there are the same needs and difficulties. To-day more than 100 different types of motors are in use in various parts of Europe, and they have as a rule been quite successful, carrying freight and passengers at a profit where with an ordinary train of a locomotive and tender with two or three cars there has been a loss. One of the most interesting of these motors, and which has attracted unusual attention, is that of the Peabody Steam Car Company, of London and Buda-Pesth. It differs from the others in using steam as the motive power, and has a boiler of unique construction. It is nine feet six inches in height by six feet in diameter, fitted up with 295 return tubes and has a grate area of nine square feet and a heating surface of over 500 square feet. The furnace is of hemispherical shape and pressed hydraulically from a single flat plate, so that there are no seams or rivets exposed to the action of the fire. The return tubes are so arranged as to superheat the steam. The motor is slung from the frame-



SECTION OF WATER-TUBE BOILER OF PEABODY STEAM CAR CO.

work by a spring suspension with flexible connection with the boiler and all the working parts enclosed in water and dust-proof casings and run in an oil bath, which reduces the wear and tear to the minimum. The greatest novelty, though, is that the engine is connected with the wheels by the same gearing used in electric vehicles. Between the crank-shaft and the driving axle is introduced an intermediate shaft carrying three gear wheels. These give the different rates of speed and better control of the vehicle. The half-speed gear is used for starting and for heavy gradients. So far it has seemed that this method of propulsion is cheaper even than gasoline or electricity. With a 15-horse-power motor the fuel consumed averages 6.5 pounds per hour and the total running cost six cents a mile, which includes fuel, oil, attendance, etc. The car will carry 33 passengers and can reach a speed of 60 miles an hour. On the state railroads of Wurtemberg these engines have been run cheaper than the Daimler gasoline motors, and similar results have been obtained upon the Hungarian railroads and in Bavaria.

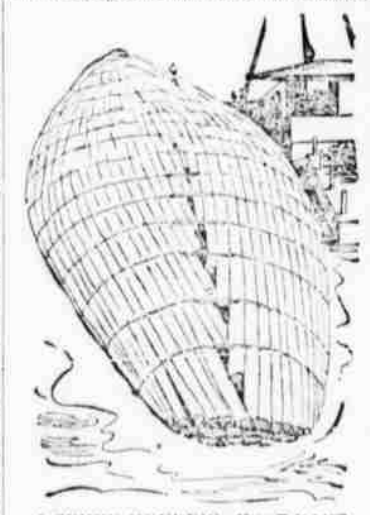
RAFTING ACROSS PACIFIC.

Ten Million Feet of Lumber Lashed Together Into Largest Raft Ever Built.

The largest raft ever built will attempt the longest voyage ever made by a raft. Ten million feet of the finest Oregon lumber, valued at \$75,000, will leave the Columbia river for China. Monster logs from 100 to 200 feet in length are being assembled in an exaggerated cigar shape, by means of a "cradle"—a Canadian idea. The cradle looks like the skeleton framework of a great ship. The raft extends ninety feet under water and arches ten feet above. One hundred and fifty tons of mammoth chain binds the mass. One main chain extends from end to end; from this belt chains placed at frequent intervals extend clear around the raft.

When the raft is finished the cradle separates into two parts by the removal of key pins, and the parts are hauled out of the way. An immense auxiliary hawser as large around as a man's body will serve as the tow rope. Two sea-going tugs will tow the raft, burning oil, which will be supplied by an oil ship which will accompany the "fleet."

Such a raft could be constructed nowhere else in the world, for in no other country can be found the giant trees and the necessary facilities for forming them into a raft. The illustration shows a 700-foot raft which successfully made a trip from the Columbia river to San Francisco in ten days. Several previous attempts at ocean rafting have met with failure, the rafts going to pieces during a storm. The floating logs constitute a great danger to navigation, and float to great distances. Pieces of one Oregon raft were found months later thousands of miles away on the coasts of Hawaii and Mexico. Improvements and additional safeguards have since been made.



A SEVEN-HUNDRED-FOOT RAFT.

The big raft is being constructed under the superintendency of Hugh R. Robertson, the father of ocean giant rafting. If this one safely makes the voyage of over 6,000 miles it is expected to net a profit of \$50,000 or more.

The logs composing the raft will be used for spars and piling. In hoisting them into the cradle, they are lifted one by one by a derrick operated by a hoisting engine, each log being left in the exact position it is to occupy on the long voyage. A daring logger rides every log on its sawn course through the air, guiding its descent.

The enterprise is looked upon as venturesome in the extreme, says the National Tribune, though the builders are sanguine of success. The cost of building the raft is enormous, the cradle alone costing thousands of dollars.

SKILL OF THE ANCIENTS.

Attempts Which Were Made Centuries Ago at Anatomical Repairs.

"What is known to modern dentists as bridge work was familiar to the Egyptians, as extant specimens attest," says the British Medical Journal. "Plaster ears, noses and lips were common among the Indians, where the cutting off of these features was a punishment much in use; and Greek and Roman veterans who had lost a leg or an arm in war tried to make good the deficiency by artificial substitutes." We read further:

"What is said to be the oldest artificial leg in existence is now in the museum of the Royal College of Surgery, of England. It was found in a tomb at Capua. Pliny speaks of a Roman warrior who, a century and a half before the birth of Christ, wore an artificial hand with which he was able to handle a sword. In the middle ages artificial limbs sometimes repaired the disabilities of war. The 'Iron hand' of Goez von Berlichingen was an ingenious piece of mechanism made for that famous knight in 1504. A century later an artificial hand was worn by Christian, duke of Brunswick. Ambrose Pare devised artificial limbs with movable joints which were made for him by artificers, of whom Lorrain, a locksmith, was the most famous. Pare devotes a special chapter to the means of repairing or supplying natural or accidental defects in the human body. He describes artificial eyes and noses, an artificial tongue and an artificial palate. At a later period Father Sebastian, a Carmelite monk, made movable arms and hands. In the earlier part of the seventeenth century Peter Lowe, in his 'Discourses of the Whole Art of Chirurgery,' gives representations of artificial legs. About the middle of the same century Falcinelli, a Florentine surgeon, mentions the use of artificial eyes of silver, gold and crystal painted in various colors; he also describes artificial ears made of the same metals, and fixed by strings to the head or stitched into the skin with gold or silver wire. Silver noses are said to have been in use at an earlier date."

COUNTRY LIFE IN A FLAT.

The Odd Scheme of a City Dweller Who Longs for an Outdoor Life.

A bachelor in upper New York leased an entire floor in an apartment house before it was completed with the understanding that he was to have it finished and furnished it according to his own fancy. He is fond of rural life, says the Sun, but his business does not permit him to live out of town. In order to have his surroundings harmonize with his notions he has had his quarters arranged this way:

His reception room is of unfinished timber, resembling hewed logs. The ceiling shows the rafters. The electric bulbs are incased in perforated tin resembling the old-fashioned tin lanterns.

Beyond is the tepee, utilized as a smoking room. It is separated from the sleeping apartment by cedar poles in the rough, constructed to resemble a rail fence. The tepee is arranged like a tent. A big iron kettle is suspended from a crane in the center. This is the ash receiver. The floor is covered with animal rugs. A collection of bows and arrows and tomahawks, horns, scalp knives and imitation scalp completes the scheme.

In the room next following, guns, rifles, pikes, fish nets and spears are in evidence. A big, rough board holds flasks of various sizes, glasses, tumblers and cups. The flasks contain any brand which the thirsty visitor may desire. A coon skin is tacked over the bar and benches take the place of chairs.

A fence divides the "trough" from the next room, which is arranged to represent the back yard of a country home, with a dog kennel near the gate and a well box, with a sweet, on one corner stands the bucket, and a dipper and an old gourd hang on the box. The picture is realistic, but the windlass is never turned.

Back of this is the end of a barn. The door is painted red. In an open square near by is the painted head of a horse, looking out as naturally as if it was about to whinny for its oats.

A loose plank walk leads from the barn to the bathroom, which is concealed from view by what looks like a high board fence. Its equipments are about the only modern equipments on the entire floor.

CHURN BUTTER AT TABLE.

Novelty in Dairy Machines Introduced in London with Good Effect.

Londoners recently had an opportunity in their dairy show to see a novelty in machines which may modify our breakfasts considerably and usually make them to their advantage. Epicures long ago found out that the only way to have satisfactory tea or coffee is to make it yourself on the table. With butter such a proceeding would have been out of the question, and we have all been dependent on the dairymaid and the grocer, who, alas! too often reflect on their customers a rancid, lardered substance better suited for axles than for stomachs.

In French and German markets it is easy to get sweet butter every morning fresh from the country. In English and American cities it is seldom possible to do this, therefore we ought to bless the inventor of the new machine referred to—a churn which makes butter in 30 seconds. "It is so handy," they are told, "that it might very well be placed on the tea table as an accessory to the cups and saucers and yet not look out of place. Given the requisite amount of cream, with a temperature of 60 degrees, butter can be made at any time when desired."

Such an invention is really of greater importance than it may appear at first sight. There is high medical authority for the assertion that there is nothing Americans need so much as a greater supply of easily digested fat. Fresh butter is the best of these fats and the more pure and tempting, we can make it the more will dyspeptics, invalids and all hard workers be benefited.

Modern Love-Making.

Courtship is dead. Young men no longer make passionate avowals, they never start when she approaches, they do not grow pallid with jealousy if another seems to be in favor, they certainly do not write sonnets to their mistress' eyebrow. In fact, they scarcely even go so far as to write her a letter, and if they do so to this length the result is never worth republishing in book form. Lovers do not talk about their hearts, and so on, and if engagements are terminated the severed twain have no scruples about subsequently meeting each other. In novels something must be done to make up for the unromantic spirit of the age, so awful situations have to be invented for hapless heroines, who either have to kill themselves or be killed or die in lunatic asylums or convents.—London World.

America's "Good" Women.

There are many varieties of good women in the world, some passive and others active, some subjective and others aggressive. The good American woman is the most active and aggressive of her sex. She exercises the strictest discipline over her own family. She has the most decided convictions on social questions. In nine cases out of ten she is an anti-drinker, an anti-smoker, anti-gambler.—Blackwood's Magazine.

Like a Politician.

Lawson—Byones always thinks before he speaks, doesn't he?
Dawson—Yes, but then he doesn't always say what he thinks.—Sowerbyville Journal.

CONGRESS AND THE ISSUES.

Position of the Parties on All the Great Questions to Be Decided.

The great questions before congress are: The isthmian canal, railroad rate legislation, the Philippine tariff bill, the Santo Domingo treaty and joint statement for Oklahoma and Indian territory and for Arizona and New Mexico. There are a large number of Republican congressmen who are opposed to all these measures, some honestly disagreeing with the policies involved and others because they would like to "hold up" the president of their party and yet others for reasons that will hardly bear the light of day. The Democrats favor voting all the money necessary to build the Panama canal with proper restrictions to protect the people of the United States from waste and extravagance. They advocate the railroad rate legislation to abolish unreasonable rates. They favor the Philippine tariff bill as a step in the right direction towards honest and fair dealing with our unfortunate subjects in those islands. They are for joint statement for Oklahoma and Indian territories, but do not want to force joint statement on Arizona and New Mexico without giving the people of each of those territories the right to decide the question of joint statement by referendum vote, the administration programme being to force them in as one state.

The Santo Domingo treaty, with which is more or less coupled the Venezuela issue, is a matter of state and only the president and the senate deal with it, and, as the debates are secret, it is not yet certain what action will be taken. On general principles, however, the Democrats disapprove of any treaty or arrangement that looks towards a protectorate over any foreign people and an entangling alliance with any foreign power is especially distasteful to them.

The Republican leaders have determined not to allow the tariff question, other than for the Philippines, to be considered, and as they control the committee on ways and means, to which all revenue bills are referred, there will be no opportunity given to consider that important issue. The Democrats, of course, favor a revision of the tariff so that trust products cannot be sold abroad cheaper than here and a revision of the schedules that would reduce prices on trust products to a reasonable basis, while at the same time producing enough revenue to support the government, honestly and economically administered.

There are other minor issues that the Republicans have brought forward, such as ship subsidy, which is unnecessary to say the Democrats vigorously oppose, on the general principle of opposition to all subsidies.

The voters of the United States will be called upon next fall to decide which party has taken the position for the greatest benefit of all the people, and the majority of the voters who believe in equal rights to all and special privileges to none cannot but approve the Democratic position on all these issues and cannot endorse the Republican slant of criticism and commission, with their protection of special interests.

POLITICAL COMMENT.

—What we need in Panama is more money paid out in wages and less in salaries.—Los Angeles Herald.

—Cole Younger once saved the life of Steve Elkins, but a generous country has never laid it up against him.—Chicago Tribune (Rep.).

—Chauncey Depew's latest vindication consists in the fact that the state legislature failed to request him to get out of office.—Chicago Daily News.

—It seems easy enough to get a new tariff law for the Philippines, but it is a mighty hard matter to get a revision for the United States.—Savannah News.

—"A big slump in our trade with Germany is imminent," say the dispatches from Washington. The inevitable stand-pat penalty.—Atlanta Constitution.

—Commissioner Garfield says the beef trust is too big for any one state to handle. Still, the beef trust is on the list of protected "infant industries."—Washington Post.

—John Morley, soon after he had visited the president at the White House, is said to have remarked: "He is a sort of cross between St. George and St. Vitus."—Chicago Chronicle (Rep.).

—Secretary Root may not have been diplomatic but he was deadly accurate in his talk to the house appropriations committee about the defects of our consular system. The reason it is not better is that congress does not want it to be better. It is congress that maintains the vicious practice of keeping a consular position as a shelf for a disabled politician if not as a snug berth for an ignorant but efficient political worker. Mr. Root pointed out that a bill to remedy these evils had been introduced in the senate, but that nearly all the reforming energy had been taken out of it by the committee which reported it.—N. Y. Post.

—Much as he admires Mr. Roosevelt, Jacob Riis is so broad-minded that he admits Washington and Lincoln to membership in the same class with his friend, the president.—Chicago Daily News.

—It does not surprise the Philadelphia North American that there is in congress a feeling of bitter hostility to the president, and a determined purpose to thwart him, and to harness him during the present session. The unpleasant fact is that the men in congress who ought to represent the people in many cases represent interests strongly hostile to the people.

Tumors Conquered Without Operations

Unqualified Success of Lydia E. Pinkham's Vegetable Compound in Cases of Mrs. Fox and Miss Adams.



One of the greatest triumphs of Lydia E. Pinkham's Vegetable Compound is the conquering of woman's dread enemy, tumor.

So-called "wandering pains" may come from its early stages, or the presence of danger may be made manifest by excessive monthly periods accompanied by unusual pain extending from the abdomen through the groin and thighs.

If you have mysterious pains, if there are indications of inflammation, ulceration or displacement, don't wait for time to confirm your fears and go through the horrors of a hospital operation; secure Lydia E. Pinkham's Vegetable Compound at once and begin its use and write Mrs. Pinkham of Lynn, Mass., for advice.

Read these strong letters from grateful women who have been cured:

Dear Mrs. Pinkham:—(First Letter.) "In looking over your book I see that your medicine cures Tumors. I have been to a doctor and he tells me I have a tumor. I will be more than grateful if you can help me, as I do not desire an operation."—Fannie D. Fox, Bradford, Pa.

Dear Mrs. Pinkham:—(Second Letter.) "I take the liberty to congratulate you on the success I have had with your wonderful medicine."

"Eighteen months ago my periods stopped. Shortly after I felt a hard lump in my abdomen, and was told that I had a tumor and would have to undergo an operation."

"I soon after read one of your advertisements and decided to give Lydia E. Pinkham's Vegetable Compound a trial. After taking five bottles as directed, the tumor is entirely gone. I have again been examined."

Lydia E. Pinkham's Vegetable Compound; a Woman's Remedy for Women's Ills.

"They've found out now," observed Uncle Jerry Peabody, "that a man can digest his food without a stomach, and talk without a tongue; but I know men that ain't no good to live and get along all right without any brains."—Chicago Tribune.

Popular Line to the East.

The splendid passenger service of the Nickel Plate Road, the care and attention shown passengers have made it a favorite with the inexperienced as well as those accustomed to travel. Every feature necessary to the comfort and convenience of the passenger, especially ladies traveling alone or accompanied by children, is provided. Colored Porters in Uniform are in attendance to serve the wants of all and to see that cars are kept scrupulously clean. Pullman Sleepers on all trains, and an excellent dining service, serving individual club meals or a la carte at moderate cost. When traveling East purchase your tickets via the Nickel Plate Road. All trains depart from the La Salle St. Station, Chicago. For full information regarding tickets, rates, routes, sleeping car reservations, etc., call on or address J. J. Callahan, General Agent, No. 111 Adams St., Chicago, Ill.

When a man steals a story and tells it for his own a few times, it makes him as insignificant as if he owned it to have some one steal it from him.—St. Louis Globe-Democrat.

Don't Get Footsore! Get Foot-Ease. A wonderful powder that cures tired, hot, aching feet and makes new or tight shoes easy. Ask today for Allen's Foot-Ease. Accept no substitute. Trial package FREE. Address A. S. Olmsted, Le Roy, N. Y.

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HE ATTENDS TO BUSINESS who goes straight to work to cure Hurts, Sprains, Bruises by the use of St. Jacobs Oil and saves time, money and gets out of misery quickly. It Acts Like Magic. Price, 25c. and 50c.

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